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10/573,217	05/04/2007	Torsten Ziser	CH-8231/RC-234	4986

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LANXESS CORPORATION
111 RIDC PARK WEST DRIVE
PITTSBURGH, PA 15275-1112

EXAMINER

SALVITTI, MICHAEL A

ART UNIT	PAPER NUMBER
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1767

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipmail@lanxess.com

Office Action Summary	Application No. 10/573,217	Applicant(s) ZISER ET AL.	
	Examiner MICHAEL A. SALVITTI	Art Unit 1767	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-10,12-17,19-22,24,25,37,38,40 and 41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-10,12-17,19-22,24,25,37,38,40 and 41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-10, 12-17, 19-22, 24-25, 37-38 and 40-41 are rejected under 35 U.S.C. 102(b) as being anticipated by US 2001/0006995 to *Obrecht* as evidenced by the instant specification and *Perstop* "Toluene Diisocyanate Handling Guide".

Regarding claims 1-4: *Obrecht* teaches a non-aqueous composition (e.g. Example 17 in Table 4) comprising 20% of at least one crosslinkable organic medium (A) having a viscosity of less than 1,000 mPas at a temperature of 120°C (dimeric toluylene diisocyanate). Toluene diisocyanate is admitted to possess the requisite viscosity, as admitted in the instant specification (see page 22, lines 25-26); *Perstop* (page 5) likewise shows that TDI has a viscosity of 5 mPas (0.5 cs in *Perstop*) at 135°C. Several other crosslinkable organic media (A) admitted as possessing the required viscosities are taught in *Obrecht* ¶ [0025]). The composition of *Obrecht* further comprises at least one microgel comprising a plurality of primary particles that is not crosslinked by means of high-energy radiation (hydroxyl-modified SBR gel).

Obrecht is silent regarding the variation in the diameters of the primary particles as being less than 250% as determined by the claimed formula as contained in a single

Art Unit: 1767

particle, thereby making the particles approximately spherical. The Office realizes that all of the claimed effects or physical properties are not positively stated *Obrecht*.

However, the *Obrecht* teaches a microgel particles crosslinked by means other than high energy radiation, made by substantially identical process of preparation by crosslinking the rubber particles with radical initiators (see Examples in *Obrecht*), using rubber particles of the same tradename as the instant application (OBR). Furthermore the particles of *Obrecht* are stated as having singular diameters for individual particles (see e.g. *Obrecht* ¶ [0017], and [0054]); diameter measurement is a measurement used to describe spherical particles, and therefore the particles of *Obrecht* have been interpreted to be approximately spherical and within the claimed formula. Since all of the claimed components are taught *Obrecht* and are prepared in a substantially identical manner, it has been held inherent that the composition of *Obrecht* would have the required variation in diameter property. If it is applicant's position that this is not the case: (1) evidence would need to be presented to support applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no reaching as to how to obtain a composition with the claimed property having the required variation in diameter.

Obrecht is silent regarding the microgel (B) as having a breadth of glass transition temperature range of greater than about 5°C. The Office realizes that all of the claimed effects or physical properties are not positively stated by *Obrecht*. However, *Obrecht* teaches all of the claimed components, uses rubber particles having the same tradename (OBR) and has a substantially identical process of preparation by

Art Unit: 1767

crosslinking the rubber particles with radical initiators (see Examples in *Obrecht*). Since all of the components are present in the composition of *Obrecht* and are prepared in a substantially identical manner, it has been held inherent that the composition of *Obrecht* would have the required breadth of glass transition temperature properties. If it is applicant's position that this is not the case: (1) evidence would need to be presented to support applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no reaching as to how to obtain a composition with the required breadth of glass transition temperature of greater than about 5°C.

Regarding claims 6-7: *Obrecht* (§ [0062]) shows particle sizes of 37 nm and 53 nm; the particles have a diameter such that the plurality of the particles are <99 nm and between 5-500 nm (*Obrecht* § [0062]).

Regarding claims 8-9: *Obrecht* teaches that the particles are insoluble in toluene (~100% insolubility at 23°C; § [0017]). The swelling index in toluene is under 80 in all examples (e.g. 5 in *Obrecht* § [0051]).

Regarding claim 10: *Obrecht* shows a glass transition temperature of -12°C for the microgel (§ [0063]).

Regarding claim 12: Claim 12 is a product-by-process claim. The claimed microgel therefore does not depend on its method of preparation, only the product. Nevertheless, *Obrecht* 'obtains the microgel through an emulsion polymerization (§ [0054]).

Regarding claims 13-14: *Obrecht* Example 3 (¶ [0059]-[0063]) is a styrene-butadiene rubber (SBR). The styrene-butadiene rubber has been interpreted to be a random copolymer. Homopolymers are also disclosed with sufficient specificity (e.g. polybutadiene “BR” ¶ [0009]).

Regarding claim 15: *Obrecht* modifies the microgel with a functional group reactive towards carbon-carbon double bonds (Example 2; grafting with HEMA).

Regarding claim 16: *Obrecht* teaches the crosslinkable organic medium (A) as crosslinking by reacting with heteroatoms (¶ [0024]). In the examples, TDI is crosslinking with the hydroxyethyl group from the hydroxyl-modified SBR gel (*Obrecht* ‘995 Table 4).

Regarding claim 17: *Obrecht* shows the hydroxy-modified SBR gel of Example 17 as comprising 20% of the weight of the composition (Table 4, ¶ [0070]).

Regarding claim 19: *Obrecht* Example 17 shows an additive (stearic acid) and a filler (zinc oxide).

Regarding claim 20: *Obrecht* teaches preparing the composition by mixing in a kneader, with sufficient specificity (¶ [0046]).

Regarding claim 21: *Obrecht* shows mixing on a laboratory mill (¶ [0070]).

Although *Obrecht* does not teach preparing the composition by means of a homogenizer, bead mill or three-roller mill, these methods of mixing achieve the same function as the laboratory mill above, which is mixing the (A) and (B) components. Claim 21 is a product-by-process claim. The composition of *Obrecht* appears to be substantially identical to the claimed product of claim 21, as evident by anticipation of

Art Unit: 1767

claim 20. "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). See MPEP § 2112.01.

Regarding claim 22: *Obrecht* is silent regarding the viscosity following the standardized testing protocol of DIN 53018. The Office realizes that all of the claimed effects or physical properties are not positively stated *Obrecht*. However, *Obrecht* teaches all of the claimed ingredients and a substantially identical process of preparation. Since all of the components are present in the composition of *Obrecht* and are prepared in a substantially identical manner, it has been held inherent that the composition of *Obrecht* would have the required viscosity under the claimed testing conditions. If it is applicant's position that this is not the case: (1) evidence would need to be presented to support applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no reaching as to how to obtain a composition with the required viscosity.

Regarding claim 24: *Obrecht* teaches the microgel as comprising a hydroxyl group ("hydroxyl-modified SBR gel"; Table 4).

Regarding claim 25: *Obrecht* teaches the crosslinkable organic medium as a polyol with sufficient specificity (*Obrecht* ¶ [0043]).

Regarding claim 37: *Obrecht* shows the composition of claim 1 obtained by a process of mixing the at least one crosslinkable medium (A) and the at least one microgel (B) thereby forming a mixture, and crosslinking the composition by adding at

Art Unit: 1767

least one crosslinker (C) that crosslinks the at least one crosslinkable medium (A) (Table 8 in *Obrecht* shows adding additional diisocyanates to the HEMA modified microgels made in Examples 1-4).

Regarding claim 38: *Obrecht* '995 Example 17 shows the crosslinker and the crosslinkable organic medium spatially separated until the addition of the crosslinkable organic medium; TDI is added last (¶ [0070]).

Regarding claim 40: Upon mixing, the crosslinkable organic medium (A) comprises at least one polyol and the crosslinker (C) comprises at least one polyisocyanate in *Obrecht* '995.

Regarding claim 41: *Obrecht* '995 shows mixing on a laboratory mill (¶ [0070]).

Although *Obrecht* '995 does not teach preparing the composition by means of a homogenizer, bead mill or the-roller mill, these methods of mixing achieve the same function as the laboratory mill above, which is mixing the (A) and (B) components. Claim 21 is a product-by-process claim. The composition of *Obrecht* appears to be substantially identical to the claimed product of claim 37, as set forth above. "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir.1990). See MPEP § 2112.01.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-10, 12-17, 19-22, 24-25, 37-38 and 40-41 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US 2001/0006995 to *Obrecht* as evidenced by the instant specification and *Perstop* "Toluene Diisocyanate Handling Guide", in view of U.S. Patent No. 6,136,923 to *Cheung et al.*, and further in view of EP 1078953 to *Obrecht et al.* For translational purposes, the English language equivalent of EP '953, USPN 6,620,866 to *Obrecht* (hereinafter *Obrecht '866*) is referenced.

The instant rejection set forth under 35 U.S.C. § 103(a) below is an alternative to the rejection under 35 U.S.C. § 102(b) to *Obrecht* to show that applicant's claimed properties of variation <250% and breadth of glass transition temperature greater than about 5°C are obvious modifications to *Obrecht* if not inherent.

Regarding claims 1-4: *Obrecht* teaches a non-aqueous composition (e.g. Example 17 in Table 4) comprising 20% of at least one crosslinkable organic medium (A) having a viscosity of less than 1,000 mPas at a temperature of 120°C (dimeric toluylene diisocyanate). Toluene diisocyanate is admitted to possess the requisite viscosity, as admitted in the instant specification (see page 22, lines 25-26); *Perstop* (page 5) likewise shows that TDI has a viscosity of 5 mPas (0.5 cs in *Perstop*) at 135°C. Several other crosslinkable organic media (A) admit as possessing the required

Art Unit: 1767

viscosities are taught in *Obrecht* ¶ [0025]). The composition of *Obrecht* further comprises at least one microgel comprising a plurality of primary particles that is not crosslinked by means of high-energy radiation (hydroxyl-modified SBR gel).

Obrecht is silent regarding the variation in the diameters of the primary particles as being less than 250% as determined by the claimed formula as contained in a single particle, thereby making the particles approximately spherical. *Obrecht* '866 teaches rubber mixtures and vulcanizates containing crosslinked microgel particles having spherical form (*Obrecht* '866 col. 5, lines 5-15). Spherical particles have the same diameter in every dimension, and thereby must have a variation under 250% according to the claimed formula. *Obrecht* and *Obrecht* '866 are analogous art in that they are drawn to the same field of endeavor, namely crosslinked rubber microgel materials for use in composite compositions. At the time of the invention, it would have been obvious to a person having ordinary skill in the art to precrosslink the gels of *Obrecht* such that a spherical shape is obtained (*Obrecht* '866 col. 5, lines 1-20), with the motivation of agglomerating the particles, which *Obrecht* '866 notes as improving the reinforcing properties of the microgels (*Obrecht* '866 col. 1, lines 60-68 and col. 5 lines 1-20).

Obrecht is silent regarding the microgel (B) as having a breadth of glass transition temperature range of greater than about 5°C. *Cheung* teaches that the breadth of glass transition temperature is controlled by varying plasticizer concentration (col. 2, lines 40-45). *Cheung* shows numerous examples of compositions having a breadth of T_g greater than 5°C (*Cheung* see e.g. Example 1, Table 3; ~17°C breadth), and states that a large ΔT_g is desirable (*Cheung* col. 2, line 45-51). *Obrecht* and

Art Unit: 1767

Cheung are analogous art in that they are drawn to the same field of endeavor, namely thermoplastic resin compositions utilizing crosslinked elastomers as impact modifiers.

At the time of the invention, it would have been obvious to a person having ordinary skill in the art to optimize the breadth of T_g for the microgel of *Obrecht*, as taught by *Cheung*, with the motivation of improving vibration dampening properties (*Cheung*, col. 2, line 50).

Regarding claims 6-7: *Obrecht* (§ [0062]) shows particle sizes of 37 nm and 53 nm; the particles have a diameter such that the plurality of the particles are <99 nm and between 5-500 nm (*Obrecht* § [0062]).

Regarding claims 8-9: *Obrecht* teaches that the particles are insoluble in toluene (~100% insolubility at 23°C; § [0017]). The swelling index in toluene is under 80 in all examples (e.g. 5 in *Obrecht* § [0051]).

Regarding claim 10: *Obrecht* shows a glass transition temperature of -12°C for the microgel (§ [0063]).

Regarding claim 12: Claim 12 is a product-by-process claim. The claimed microgel therefore does not depend on its method of preparation, only the product. Nevertheless, *Obrecht* 'obtains the microgel through an emulsion polymerization (§ [0054]).

Regarding claims 13-14: *Obrecht* Example 3 (§ [0059]-[0063]) is a styrene-butadiene rubber (SBR). The styrene-butadiene rubber has been interpreted to be a random copolymer. Homopolymers are also disclosed with sufficient specificity (e.g. polybutadiene "BR" § [0009]).

Regarding claim 15: *Obrecht* modifies the microgel with a functional group reactive towards carbon-carbon double bonds (Example 2; grafting with HEMA).

Regarding claim 16: *Obrecht* teaches the crosslinkable organic medium (A) as crosslinking by reacting with heteroatoms (§ [0024]). In the examples, TDI is crosslinking with the hydroxyethyl group from the hydroxyl-modified SBR gel (*Obrecht* '995 Table 4).

Regarding claim 17: *Obrecht* shows the hydroxy-modified SBR gel of Example 17 as comprising 20% of the weight of the composition (Table 4, § [0070]).

Regarding claim 19: *Obrecht* Example 17 shows an additive (stearic acid) and a filler (zinc oxide).

Regarding claim 20: *Obrecht* teaches preparing the composition by mixing in a kneader, with sufficient specificity (§ [0046]).

Regarding claim 21: *Obrecht* shows mixing on a laboratory mill (§ [0070]).

Although *Obrecht* does not teach preparing the composition by means of a homogenizer, bead mill or three-roller mill, these methods of mixing achieve the same function as the laboratory mill above, which is mixing the (A) and (B) components. Claim 21 is a product-by-process claim. The composition of *Obrecht* appears to be substantially identical to the claimed product of claim 21, as evident by anticipation of claim 20. "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). See MPEP § 2112.01.

Regarding claim 22: *Obrecht* is silent regarding the viscosity following the standardized testing protocol of DIN 53018. The Office realizes that all of the claimed effects or physical properties are not positively stated *Obrecht*. However, *Obrecht* teaches all of the claimed ingredients and a substantially identical process of preparation. Since all of the components are present in the composition of *Obrecht* and are prepared in a substantially identical manner, it has been held inherent that the composition of *Obrecht* would have the required viscosity under the claimed testing conditions. If it is applicant's position that this is not the case: (1) evidence would need to be presented to support applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no reaching as to how to obtain a composition with the required viscosity.

Regarding claim 24: *Obrecht* teaches the microgel as comprising a hydroxyl group ("hydroxyl-modified SBR gel"; Table 4).

Regarding claim 25: *Obrecht* '995 teaches the composition of claim 1, as set forth above.

Obrecht '995 is silent in showing embodiment wherein the crosslinkable medium (A) comprises at least one polyol. However, *Obrecht* '995 suggests the addition of polyols (e.g. polyethylene glycol, among others; ¶ [0043]) to the composition. At the time of the invention, it would have been obvious to a person having ordinary skill in the art to add polyols to the composition of *Obrecht* '995 with the motivation of crosslinking the composition (*Obrecht* '995 ¶ [0043]) to obtain a tougher composition.

Regarding claim 37: *Obrecht* shows the composition of claim 1 obtained by a process of mixing the at least one crosslinkable medium (A) and the at least one microgel (B) thereby forming a mixture, and crosslinking the composition by adding at least one crosslinker (C) that crosslinks the at least one crosslinkable medium (A) (Table 8 in *Obrecht* shows adding additional diisocyanates to the HEMA modified microgels made in Examples 1-4).

Regarding claim 38: *Obrecht* '995 Example 17 shows the crosslinker and the crosslinkable organic medium spatially separated until the addition of the crosslinkable organic medium; TDI is added last (¶ [0070]).

Regarding claim 40: Upon mixing, the crosslinkable organic medium (A) comprises at least one polyol and the crosslinker (C) comprises at least one polyisocyanate in *Obrecht* '995.

Regarding claim 41: *Obrecht* '995 shows mixing on a laboratory mill (¶ [0070]).

Although *Obrecht* '995 does not teach preparing the composition by means of a homogenizer, bead mill or the-roller mill, these methods of mixing achieve the same function as the laboratory mill above, which is mixing the (A) and (B) components. Claim 21 is a product-by-process claim. The composition of *Obrecht* appears to be substantially identical to the claimed product of claim 37, as set forth above. "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir.1990). See MPEP § 2112.01.

Response to Arguments

The following responses are directed to the document entitled "Remarks" (pages 6-8), received November 15th, 2010.

A) With respect to applicant's amendments, it has been noted that claim 1 has been amended to include the limitations of claims 5 and 11, former claim 11 being rejected on grounds of obviousness.

However, upon further reconsideration, the Examiner's position is that the claimed property concerning a glass transition temperature range with a breadth of greater than about 5°C is inherent to the invention of *Obrecht*. As set forth in the rejection above, *Obrecht* (US 2001/0006995) teaches a composition anticipating all components in claim 1; this composition uses starting materials admitted by applicant to possess the required properties (e.g. the listed diisocyanate crosslinkable organic media (A), the same type and tradenamed microgel rubber particles (B) having the required size) and uses the same general processes as the instant claimed invention in producing this composition. In the absence of further evidence persuasive argument, or limitations distinguishing the instant invention from *Obrecht*, the instant invention has been held to be anticipated by *Obrecht*.

Alternatively, the properties not explicitly taught by *Obrecht* (sphericity and T_g breadth) are known in the art, and the means of achieving said properties is likewise known. Making the proposed combinations, a person having ordinary skill in the art would expect tire compositions having increased reinforcement and vibration

Art Unit: 1767

dampening. In the absence of further evidence or persuasive argument, the instant invention has been interpreted to be a case of *prima facie* obviousness.

B) Applicant's arguments concerning the breadth of T_g in *Cheung* (USPN 6,136,923) have been considered but have not been found to be persuasive.

On page 10 of arguments, applicant cites the measurement protocol of the instant invention and argues that the dual T_g of *Cheung* does not possess the required breadth of glass transition temperature.

In response, this argument is not found to be persuasive. Applying applicant's two-point average as a means of determining the breadth of T_g , every composition in *Cheung* showing two glass transition temperatures exhibits a breadth of glass transition temperature greater than applicant's claimed 5°C. As taught in *Cheung*, a person having ordinary skill in the art recognizes that a large breadth of glass transition temperature leads to vibration dampening properties (*Cheung* col. 2, line 50), and this result is controlled by adding plasticizer to the composition. Therefore a person having ordinary skill in the art would be motivated to add plasticizer to the composition of *Obrecht* to increase the breadth of T_g , since the compositions of *Obrecht* are used in tires, and a person having ordinary skill in the art recognizes that vibration dampening in this application will reduce the sensation of uneven pavement and bumps in the road.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL A. SALVITTI whose telephone number is (571)270-7341. The examiner can normally be reached on Monday-Thursday 8AM-7PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. A. S./
Examiner, Art Unit 1767

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1767